

**METHODS OF FABRICATING PLASTICIZED, ANTIPLASTICIZED AND
CRYSTALLINE CONDUCTING POLYMERS AND PRECURSORS THEREOF**

ABSTRACT OF THE DISCLOSURE

Methods of forming materials containing precursors to electrically conductive polymers and electrically conductive polymers are described which have a high degree of crystallinity. The high degree of crystallinity is achieved by preparing the materials under conditions which provide a high degree of mobility to the polymer molecules permitting them to associate with one another to form a crystalline state. High levels of electrical conductivity are achieved in the electrically conductive materials without stretch orienting the material. The enhanced electrical conductivity is isotropic as compared to a stretch oriented film which has isotropic electrical conductivity. In the preferred embodiment, additives are added to a solution containing a solvent and the precursor or electrically conductive polymer. The additives are preferably plasticizer or diluents. As the solvent is removed the material dries and contains a higher degree of crystallinity than in the absence of the additive.